

ABSTRACT OF THE DISCLOSURE

It is intended to solve a problem whereby Si nodules occur, in a wiring thin film deposition method, when depositing an Al wiring film on a semiconductor substrate with a sputter method using an Al-Si-Cu target. An Al_3Ti film having a large amount of dissolved Si is deposited on a semiconductor substrate to form a laminate with an Al wiring film, and heat treatment is performed at a temperature of at least 400°C , to thereby absorb excessive Si into the Al_3Ti film and so prevent the occurrence of Si nodules. Also, by depositing Al film at a temperature of at least 400°C at the time of depositing the Al wiring film on the Al_3Ti film, excessive Si is caused to be absorbed in the Al_3Ti film. Further, at the time of depositing a Ti film on the semiconductor substrate and depositing the Al wiring film, the Al film is deposited at a temperature of at least 400°C , there is reaction between the Ti film and the Al film within the laminate, causing an Al_3Ti film to be produced, and excessive Si is absorbed in the Al_3Ti film produced.